



# NOAA *Backgrounder*

## NOAA's Teacher at Sea Program

### *Bringing Hands-On Ocean Research Experience to the Classroom*

The enthusiasm for learning generated between teachers and students is the biggest payoff of NOAA's Teacher at Sea program, where teachers from elementary school through college go to sea aboard NOAA research and survey ships to work under the tutelage of scientists and crew.

Now in its 14th year, the program has enabled more than teachers to gain first-hand experience of science at sea. Teachers can enrich their classroom curricula with a depth of understanding made possible by living and working side-by-side, day and night, with those who contribute to the world's body of scientific knowledge.

#### **A WORD ABOUT NOAA. . .**

The National Oceanic and Atmospheric Administration (NOAA) conducts research and gathers data about the global oceans, atmosphere, space, and sun, and applies this knowledge to science and service that touch the lives of all Americans.

NOAA warns of dangerous weather, charts our seas and skies, guides our use and protection of ocean and coastal resources, and conducts research to improve our understanding and stewardship of the environment which sustains us all.

A Commerce Department agency, NOAA provides these services through five major organizations: the National Weather Service, the National Ocean Service, the National Marine Fisheries Service, the National Environmental Satellite, Data and Information Service, and Office of Oceanic and Atmospheric Research; and numerous special program units. In addition, NOAA research and operational activities are supported by the Nation's seventh uniformed service, the NOAA Corps, a commissioned officer corps of men and women who operate NOAA ships and aircraft, and serve in scientific and administrative posts.

For further information: NOAA Office of Public Affairs, 14th Street and Constitution Avenue NW, Room 6013, Washington, D.C. 20230. Phone: (202) 482-6090.

Teachers may select a cruise aboard one of NOAA's 14 participating ships. Fisheries research vessels perform biological and physical science studies in support of fisheries research. Oceanographic and coastal research vessels perform physical science studies in support of physical oceanography, atmospheric studies and bathymetric mapping. Hydrographic survey vessels scan the coastal sea floor with side-scan sonar and sophisticated bottom sounding systems to determine least depths and to locate submerged obstructions and navigational hazards for the creation or updating of the nation's nautical charts.

#### **Benefits for All**

The feedback from teachers who have participated in the program is overwhelmingly positive. According to Kimberly Eubanks, an elementary school teacher from Columbia, Md., "I went on the OREGON II to do coral reef fish assessment. We worked 12-hour days, 7 days a week and I loved every minute of it. The crew was teasing me about how hard I was working. I was in work rotations, just like all the scientists. I figured I was there to experience everything, so I did! The scientists, officers and crew were wonderful. They bent over backwards to share all their experiences and knowledge with me. It was an amazing adventure that I would do again in a heartbeat! The benefit to NOAA is substantial as well. Scientists gain motivated volunteers to help carry out their projects, and scientists and crew enjoy having someone on board who is enthusiastic

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and eager to learn about all aspects of the cruise. Perhaps most important, the program serves NOAA's mission by promoting among teachers and their students a greater awareness of the need to understand and protect the world's oceans and their resources.

Best put by Betty Moellenberg, a teacher from Colorado, "At the least you will begin to understand why we need to know so much more in order to protect and safeguard this largest of our natural resources, and to understand the ways in which we can learn this. I went into this project with a lot of hesitation and fears, and came out with a deep feeling for the sea and a sense of commitment to share with my kids and other teachers—respect and awe, and the knowledge we must learn what we can in order to save both the sea and its inhabitants."

Through the Teacher at Sea program, NOAA and students gain another important benefit. By talking about their experiences and sharing photos or video taken during a cruise, teachers can encourage their students to think about potential marine careers with NOAA or other science-based organizations.

### **Logistics**

Though most teachers take advantage of the program during the summer, cruises are available throughout most of the year on a space-available basis. Cruises range from one week to several months. Teachers on sabbatical may have the option to go on an extended cruise; in recent years, teachers have participated in cruises going to Australia, Japan and Chile, giving them a wealth of experience in global climate and air chemistry research. Information about the Teacher at Sea program is available on the Web at [www.tas.noaa.gov](http://www.tas.noaa.gov).

There you'll find a downloadable application, ship and research descriptions, and articles written by teachers who have participated in the program. The Web site also includes their daily logs, photos and streaming video.

### **Steps for applying:**

Download the application from the Web site, fill it out and return it to the program coordinator by March 31, 2005. Be very specific about when you are available to sail and what research interests you most.

Download and complete a medical history questionnaire. You must have a TB test completed within 12 months of the time you sail. You must be in good health to participate.

Arrange and pay for your transportation to and from the docking site. There are no other costs to you. Sponsorship opportunities are sometimes available to cover travel. If selected to participate, you will be notified of such opportunities.

Applications and support materials for the program should be received by March 31, 2005.

### **Giving Back:**

Teachers must be willing to fulfill several program requirements upon completion of their cruise:

- \* Submit a report or journal entries to the NOAA Teacher at Sea Program Office detailing the cruise events
- \* Create a mini-unit of lessons (8-10) based on the experiences at sea.
- \* Submit an article for publication or make a presentation at an educators' conference for colleagues.

### **NOAA Marine and Aviation Operations**

The Teacher at Sea program is coordinated and administered by NOAA Marine and Aviation Operations, which operates, manages and maintains the NOAA fleet of ships and aircraft. NMAO is composed both of civilians and officers of the NOAA Commissioned Corps, the nation's seventh and smallest uniformed service. ☺

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